YUAN "CHARLES" CUI
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yccui.github.io

EDUCATION

Northwestern University   Evanston, IL
Ph.D., Computer Science   2020 - Present
  Advisor: Matthew Kay
Master's, Computer Science   2023
  Advisor: Matthew Kay

Oberlin College   Oberlin, OH
B.A., Mathematics, Computer Science   2016 - 2020

Budapest Semesters in Mathematics   Budapest, HU
Study Abroad   2019

PUBLICATIONS

Odds and Insights: Decision Quality in Exploratory Data Analysis Under Uncertainty. Abhraneel Sarma, Xiaoying Pu, Yuan Cui, Eli T Brown, Michael Correll, Matthew Kay. *ACM CHI* 2024.

Adaptive Assessment of Visualization Literacy. Yuan Cui, Lily W. Ge, Yiren Ding, Fumeng Yang, Lane Harrison, Matthew Kay. *IEEE VIS* 2023.

CALVI: Critical Thinking Assessment for Literacy in Visualizations. Lily W. Ge, Yuan Cui, Matthew Kay. *ACM CHI* 2023. (Best Paper Honorable Mention)

Can an Algorithm be My Healthcare Proxy?. Duncan McElfresh, Samuel Dooley, Yuan Cui, Kendra Griesman, Weiqin Wang, Tyler Will, Neil Sehgal, and John Dickerson. *Explainable AI in Healthcare and Medicine* 2021.

PROFESSIONAL EXPERIENCE

RegLab @ Stanford Law School   Stanford, CA
Graduate Fellow   06/2023 - 08/2023
  Designed statistical sampling techniques to estimate racial disparity when data is scarce, and established performance guarantees with mathematical proofs. Built simulations and estimated the health disparity in a dataset containing ~7M Americans' healthcare records.

Carnegie Mellow University & Data Science for Social Good Foundation   Pittsburgh, PA
Data Science Fellow   05/2022 - 08/2022
  Built a machine learning system to improve the routing of the 988 Suicide & Crisis Lifeline which serves 2,000,000+ callers per year. Obtained preliminary results that showed the new system could help ~20,000 additional callers each year.

University of Chicago Consortium on School Research   Remote
Research Intern   03/2022 - 05/2022
  Conducted clustering analysis on Chicago Public Schools data to predict students' graduation rate.

HomeRiser, Inc <div align="right">Remote</div>
Co-founder, Head of Data Science <div align="right">01/2021 - 10/2021</div>
Co-founded a real estate technology start-up that uses a novel business model powered by data science to provide more flexible and affordable ways to finance people's home ownership. Developed a financial model in Python that simulated cash flow and generated a detailed profit and loss statement.

PRESENTATIONS, WORKSHOPS, TUTORIALS

Conference Presentations

IEEE VIS. *"Adaptive Assessment of Visualization Literacy."* Oct 2023, Melbourne, Australia.

Data for Good. *"Improving the 988 Suicide & Crisis Lifeline's Service Through Better Call Routing."* Sept 2022, Seattle, WA. Joint with Irene Tang.

Tutorials

ACM FAccT. *"Data Externalities."* Mar 2021, Remote. Joint with Rediet Abebe, Mihaela Curmei, Andreas Haupt, and Yixin Wang.

Workshops

ACM CHI. *"Toward a More Comprehensive Understanding of Visualization Literacy."* May 2024, Honolulu, Hawaii. Joint with Lily W. Ge, Maryam Hedayati, Yiren Ding, Karen Bonilla, Alark Joshi, Alvitta Ottley, Benjamin Bach, Bum Chul Kwon, David N. Rapp, Evan Peck, Lace M. Padilla, Michael Correll, Michelle A. Borkin, Lane Harrison, Matthew Kay.

HONORS AND AWARDS

NICO Intersection Science Fellowship, Northwestern University	2024
HCI + Design Cluster Fellowship, Northwestern University	2022
Phi Beta Kappa, Oberlin College	2020
Elbridge P. Vance Scholar of Mathematics, Oberlin College	2016 - 2020

PROFESSIONAL SERVICE

EAAMO Bridges (formerly MD4SG) <div align="right">Remote</div>

Co-Organizer	2022 - present
Co-Lead of the Data Economies Working Group	2021
Membership Manager	2021

Conference Reviewer

IEEE VIS	2024
ACM CHI	2024

Conference Volunteer

ACM STOC	2021
ACM EC	2020

TEACHING EXPERIENCE

Teaching Assistant

Northwestern University   Evanston, IL
  Computer Science Department   2021-2024
  Design & Analysis of Algorithms, Mathematical Foundations of Computer Science (2x)

Oberlin College   Oberlin, OH
  Mathematics Department   2017-2020
  Linear Algebra (2x), Discrete Mathematics (2x), Calculus II, Calculus I
  Economics Department   2019
  Principles of Finance
  Computer Science Department   2017
  Introduction to Computer Science

TECHNICAL

Programming
  Python, R, PostgreSQL, LaTeX

Organization
  Github, Trello

Research Software and Skills
  Qualtrics, Prolific